



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,690	10/07/2003	Ravi Kuchibhotla	CS23737RL	6201
20280	7590	08/16/2005	EXAMINER	
MOTOROLA INC 600 NORTH US HIGHWAY 45 ROOM AS437 LIBERTYVILLE, IL 60048-5343			VU, MICHAEL T	
			ART UNIT	PAPER NUMBER
			2683	

DATE MAILED: 08/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/680,690

Applicant(s)

KUCHIBHOTLA ET AL.

Examiner

Michael Vu

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/07/03</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Regarding claims 3, the phrase "(in priority order)" on (3), and "(in priority order)" (4) which should not be use the "()". Since it could be interpreted as being optional. If "priority order" is claimed, please remove parentheses.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1 - 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hogan (US 2003/0040313) in view of Park (US 6,741,868).

Regarding to **claim 1**, Hogan teaches a method for selecting a core network for a communication device (Fig. #6, show two different core networks / Circuit & Packet Switched Services) comprising the steps of: receiving at least one core network identifier (the core networks forwarded information with the core ID would be forwarded to let the mobile know which core network sent that message [0016], [0047]); selecting a core network identifier to form a selected core network identifier (the core network determine or analyze the mobile terminal identifier which mobile terminal belongs [0016], and [0047]); setting an indicator to indicate whether a substitute core network is allowed (when EU enters a new location area, it checks its forbidden list to see if this location area is allowed [0037] and [0045, and Fig. #10, and Fig. #12]); determining whether the selected core network identifier corresponds to a shared network (Fig. #2, Fig. #12 [0016, 0047] shows selected core network); forming a registration request message containing the selected core network identifier (Fig. #13A, #13B, and #13C Location Updating Accept/Reject/Request messages [0048], [0049], [0050]); **but is silent on** including the indicator in the registration request message, if the selected core network identifier corresponds to a shared network; and transmitting the registration request message. However, Park teaches the method and apparatus for interfacing among mobile terminal, base station and core network in mobile telecommunications system, (see Abstract, Fig. #7B core network information elements, and Fig. #11A, #11B are showing how to detect a core network and received messages e.g. system

parameter message, access channel message and registration request message (C5, L12-17)).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hogan, such that the indicator in the registration request message, if the selected core network identifier corresponds to a shared network; and transmitting the registration request message to modify to have a different instructions and interfacing among a mobile terminal, base station and a core network in a mobile telecommunications system.

Regarding **claim 2**, a method according to claim 1, Hogan **but is silent on** wherein the at least one core network identifier is at least one public land mobile network identifier (PLMNid). However, Park teaches the terminal identifies a provider of a system to which it accesses based on PLMN_ID (Fig. #7B, Fig. #9A and #9B, C18, L5-14).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hogan, such that wherein the at least one core network identifier is at least one public land mobile network identifier (PLMNid) to controlling and management/maintenance between a mobile terminal and a core network in a mobile telecommunications system.

Regarding **claim 3**, a method according to claim 1, Hogan **but is silent on** wherein the step of selecting includes the communication device automatically choosing the selected core network identifier according to the following priority levels (C18, L5-40): (1) registered core network (C18, L5-40 reads on), (2) home core network (C18,

Art Unit: 2683

L5-40 reads on) user-controlled list of core networks (in priority order, (4)(C18, L5-40), operator-controlled list of core networks (in priority order), (5) core networks with sufficient received signal quality in random order, and (6) other core networks in order of received signal quality (the stored information can be stored on a read only memory (ROM) in the controller 811, or on a dip switch to which a central processing unit (CPU) of the controller 811 is connected. The message exchanged with the core network is preferably a management/maintenance message or a signaling message (C17, L11-16). However, Park teaches the communication device that detects and selects the core network operating type information of the connected for network on the basis of information from a read only memory (ROM=Automatic=UE turn Power On=RPLMN / HPLMN=Core Network), and the information from a dip switch which may be manually operated by an operator (C18, L28-40 reads on), and interfacing between the terminal and the base station in order to perform setting and interfacing functions (C20, L48-54, C18, L28-36, and see Fig. #8A, and #8B Controlling Unit or Terminal Controller).

As examiner noted when a user turns on a mobile phone, the mobile phone must select a PLMN for providing communication services. According to the Global System for Mobile communication (GSM) specifications, when a mobile phone selects a PLMN, the registered public land mobile network (RPLMN) that the mobile phone registered last time is the first priority PLMN, and the home public land mobile network (HPLMN) for the mobile phone is the second priority PLMN. In other words, when selecting a PLMN, a mobile phone must select a PLMN with higher priority according to the specifications. Only when the first priority PLMN (for example, (RPLMN) cannot be

selected, a mobile phone can select the second priority PLMN (for example (HPLMN) to provide communication

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hogan, such that wherein the step of selecting includes the communication device automatically choosing the selected core network identifier according to the following priority levels: (1) registered core network, (2) home core network, (3) user-controlled list of core networks (in priority order), (4) operator-controlled list of core networks (in priority order), (5) core networks with sufficient received signal quality in random order, and (6) other core networks in order of received signal quality to controlling and management/maintenance between a mobile terminal and a core network in a mobile telecommunications system.

Regarding **claim 4**, a method according to claim 3, Hogan **but is silent on** wherein the step of setting indicates that a substitute core network is allowed when the selected core network identifier is selected at priority level (5). However, Park teaches the format of the core network connected to hybrid type network such as GSM-MAP and ANSI-41 (Fig. #9A, #9B C19, L12-32).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hogan, such that wherein the step of setting indicates that a substitute core network is allowed when the selected core network identifier is selected at priority level (5) to modify to have a different instructions and interfacing among a mobile terminal, base station and a core network in a mobile telecommunications system.

Regarding **claim 5**, a method according to claim 3, Hogan **but is silent on** wherein the step of setting indicates that a substitute core network is allowed when the selected core network identifier is selected at priority level (6). However, Park teaches The stored information can be stored on a read only memory (ROM) in the controller 811, or on a dip switch to which a central processing unit (CPU) of the controller 811 is connected. The message exchanged with the core network is preferably a management/maintenance message or a signaling message (C17, L11-16, and C18, L5-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hogan, such that wherein the step of setting indicates that a substitute core network is allowed when the selected core network identifier is selected at priority level (6) to modify to have a different instructions and interfacing among a mobile terminal, base station and a core network in a mobile telecommunications system.

Regarding **claim 6**, a method according to claim 1, Hogan **but is silent on** wherein the step of selecting includes the communication device presenting the at least one core network identifier to a user according to the following priority levels (1) (C18, L5-40): registered core network (C18, L5-40 reads on), (2) home core network (C18, L5-40 reads on) user-controlled list of core networks (in priority order, (4)(C18, L5-40), operator-controlled list of core networks (in priority order), (5) core networks with sufficient received signal quality in random order, and (6) other core networks in order of received signal quality (The stored information can be stored on a read only memory

(ROM) in the controller 811, or on a dip switch to which a central processing unit (CPU) of the controller 811 is connected. The message exchanged with the core network is preferably a management/maintenance message or signaling message (C17, L11-16). However, Park teaches the communication device that detects and selects the core network operating type information of the connected for network on the basis of information from a read only memory (ROM=Automatic=UE turn Power On=RPLMN / HPLMN=Core Network), and the information from a dip switch which may be manually operated by an operator (C18, L28-40 reads on), and interfacing between the terminal and the base station in order to perform setting and interfacing functions (C20, L48-54, C18, L28-36, and see Fig. #8A, and #8B Controlling Unit or Terminal Controller).

As examiner noted when a user turns on a mobile phone, the mobile phone must select a PLMN for providing communication services. According to the Global System for Mobile communication (GSM) specifications, when a mobile phone selects a PLMN, the registered public land mobile network (RPLMN) that the mobile phone registered last time is the first priority PLMN, and the home public land mobile network (HPLMN) for the mobile phone is the second priority PLMN. In other words, when selecting a PLMN, a mobile phone must select a PLMN with higher priority according to the specifications. Only when the first priority PLMN (for example, (RPLMN) cannot be selected, a mobile phone can select the second priority PLMN (for example (HPLMN) to provide communication

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hogan, such that wherein the step of selecting

includes the communication device automatically choosing the selected core network identifier according to the following priority levels: (1) registered core network, (2) home core network, (3) user-controlled list of core networks (in priority order), (4) operator-controlled list of core networks (in priority order), (5) core networks with sufficient received signal quality in random order, and (6) other core networks in order of received signal quality to controlling and management/maintenance between a mobile terminal and a core network in a mobile telecommunications system.

Regarding **claim 7**, a method according to claim 6, Park further teaches wherein the step of selecting further includes: receiving a selected core network identifier from the user (Fig. #7B, and C18, L5-40 reads on).

Regarding **claim 8**, a method according to claim 6, Park further teaches wherein the step of setting comprises: setting the indicator to indicate that a substitute core network is disallowed (Fig. #10A / Network Capability Extension Indication; Value= True or False Indication, and #11A, #11B, #12A reads on C20, L56-67, and C21, L1-26).

Regarding **claim 9**, a method according to claim 1, Hogan **but is silent on** wherein the step of setting comprises: setting the indicator to indicate that a substitute core network is disallowed. However, Park teaches the setting the indicator to indicate that a substitute core network is disallowed (Fig. #10A / Network Capability Extension Indication; Value= True or False Indication, and #11A, #11B, #12A reads on C20, L56-67, and C21, L1-26).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hogan, such that wherein the step of setting

comprises: setting the indicator to indicate that a substitute core network is disallowed to modify to have a different instructions and interfacing among a mobile terminal, base station and a core network in a mobile telecommunications system.

Regarding **claim 10**, Hogan teaches a method for selecting a core network for a communication device comprising the steps of (Fig. #6, show two different core networks / Circuit & Packet Switched Services): Hogan **but is silent on** receiving a registration request message (C5, L12-17); extracting a selected core network identifier from the registration request message (C18, L5-40); and determining if the registration request message includes an indicator indicating whether a substitute core network is allowed (Fig. #10A / Network Capability Extension Indication; Value= True or False Indication, and #11A, #11B, #12A reads on C20, L56-67, and C21, L1-26). However, Park teaches the method for interfacing among hybrid type synchronous or asynchronous terminal to a core network in a next generation mobile telecommunications system.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hogan, such that a receiving a registration request message; extracting a selected core network identifier from the registration request message; and determining if the registration request message includes an indicator indicating whether a substitute core network is allowed to modify to have a different instructions and interfacing among a mobile terminal, base station and a core network in a mobile telecommunications system.

Regarding **claim 11**, a method according to claim 10, Park further teaches the comprising the steps of: determining a substitute core network, if the indicator indicates that a substitute core network is allowed; and forwarding the registration request message to the substitute core network (Fig. #10A / Network Capability Extension Indication; Value= True or False Indication, and #11A, #11B, #12A reads on C20, L56-67, and C21, L1-26, and C18, L5-40 reads on).

Regarding **claim 12**, a method according to claim 10, Park further teaches wherein the substitute core network shares radio access resources with a core network indicated by the selected core network identifier (Fig. #10A / Network Capability Extension Indication; Value= True or False Indication, and #11A, #11B, #12A reads on C20, L56-67, and C21, L1-26, and C18, L5-40 reads on).

Regarding **claim 13**, a method according to claim 10, Park further teaches wherein the substitute core network is a core network indicated by the selected core network identifier (Fig. #10A / Network Capability Extension Indication; Value= True or False Indication, and #11A, #11B, #12A reads on C20, L56-67, and C21, L1-26, and C18, L5-40 reads on).

Regarding **claim 14**, a method according to claim 10, Park further teaches wherein the substitute core network is not a core network indicated by the selected core network identifier (Fig. #10A / Network Capability Extension Indication; Value= True or False Indication, and #11A, #11B, #12A reads on C20, L56-67, and C21, L1-26, and C18, L5-40 reads on).

Regarding **claim 15**, a method according to claim 10, Park further teaches comprising the step of: forwarding the registration request message to a core network identified by the selected core network identifier, if the indicator indicates that a substitute core network is not allowed (Fig. #10A / Network Capability Extension Indication; Value= True or False Indication, and #11A, #11B, #12A reads on C20, L56-67, and C21, L1-26, and C18, L5-40 reads on).

Regarding **claim 16**, a method according to claim 10, Park further teaches comprising the step of: forwarding the registration request message to a core network identified by the selected core network identifier, if the registration request message does not include an indicator (Fig. #10A / Network Capability Extension Indication; Value= True or False Indication, and #11A, #11B, #12A reads on C20, L56-67, and C21, L1-26, and C18, L5-40 reads on).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 17 - 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Park.

Regarding **claim 17**, Park teaches a method for selecting a public land mobile network (PLMN) for user equipment (UE) comprising the steps of: receiving at least one PLMN identifier (PLMNid); selecting a PLMNid to form a selected PLMNid; setting an indicator to indicate whether a substitute PLMN is allowed; determining whether the selected PLMNid corresponds to a shared radio access network (RAN); forming a registration request message with the selected PLMNid; including the indicator in the registration request message, if the selected PLMNid corresponds to a shared RAN; and transmitting the registration request message from the UE (Fig. #1B GSM-MAP Network, Fig. #7B, #10A, Fig. #11B CDMA System, Fig. #12B Select PLMN, Abstract, and C18, L5-40 reads on).

Regarding **claim 18**, the method according to claim 17, Park further teaches wherein the step of setting comprises: setting the indicator to indicate that a substitute PLMN is disallowed when the UE is in manual network selection mode (Fig. #1B GSM-MAP Network, Fig. #11B, and C18, L5-40 reads on).

Regarding **claim 19**, the method according to claim 17, Park further teaches wherein the step of setting comprises: setting the indicator to indicate that a substitute PLMN is disallowed when the UE automatically selects a PLMNid that corresponds to a registered PLMN (RPLMN) of the UE, a home PLMN (HPLMN) of the UE, a PLMN on a user-controlled list of PLMNs, or a PLMN on an operator-controlled list of PLMNs (Fig. #1B GSM-MAP Network, C18, L5-40 reads on).

Regarding **claim 20**, a method according to claim 17, Park further teaches the comprising the steps of: receiving the registration request message at a radio access network (RAN); extracting the selected PLMNid from the registration request message; and determining if the registration request message includes the indicator (Fig. #1B GSM-MAP Network, C5, L12-16, and C18, L5-40 reads on).

Regarding **claim 21**, the method according to claim 20, Park further teaches the comprising the steps of: determining a substitute PLMN, if the indicator indicates that a substitute PLMN is allowed; and forwarding the registration request message to the substitute PLMN (Fig. #1B GSM-MAP Network, C5, L12-16, and C18, L5-40 reads on).

Regarding **claim 21**, the method according to claim 21, Park further teaches wherein the substitute PLMN shares radio access resources with a PLMN indicated by the selected PLMNid (Fig. #1B GSM-MAP Network, C5, L12-16, and C18, L5-40 reads on).

Regarding **claim 23**, Park teaches a method for selecting a core network for a communication device comprising the steps of (Title, Abstract, Fig. #7B): receiving at least one core network identifier (Fig. 7B Core Network Information Elements); selecting a core network identifier to form a selected core network identifier (Fig. 7B, and C18-L5-40); setting an indicator to indicate whether a substitute core network is allowed (Fig. #10 Network Capability Extension Indication/ Value=True or False, Fig. #11B CDMA System); forming a registration request message containing the selected core network identifier (Fig. #7B, and C18, L5-40 reads on); including the indicator in the registration

Art Unit: 2683

request message; and transmitting the registration request message Fig. #7B, C5, L12-16, and C18, L5-40 reads on).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Park US 6,782,274

Maguire US 2003/0028644

Gupta US 6,567,667

Korpela US 6,801,786

Rune US 2004/0014484

Brandenberg US 6,212,390

Riihinen US 2002/0072363

Serna US 2004/0203736

Kil US 2001/0046859

Sayers US 6,539,237

Lee US 2001/0005678

Art Unit: 2683

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Vu whose telephone number is (571) 272-8131.

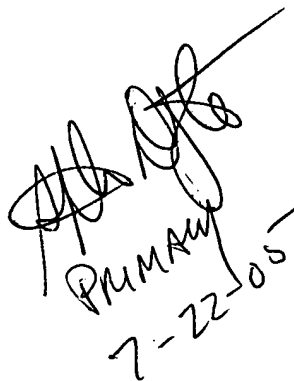
The examiner can normally be reached on 8:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael T. Vu



PRIMA
7-22-05